

REDUNDANCY STRUCTURE AND METHOD FOR HIGH-SPEED SERIAL LINK

Abstract

An integrated circuit is provided having a plurality of data transmitters, including a plurality of default data transmitters for transmitting data from a plurality of data sources and at least one redundancy data transmitter. A plurality of connection elements are provided having a first, low impedance connecting state and having a second, high impedance, disconnecting state. The connection elements are operable to disconnect a failing data transmitter from a corresponding output signal line and to connect the redundancy data transmitter to that output signal line in place of the failing data transmitter. In one preferred form, the connection elements include a fuse and an antifuse. In another form, the connection elements include micro-electromechanical (MEM) switches. The connecting elements preferably present the low impedance connecting state at frequencies which include signal switching frequencies above about 500 MHz.